from the perspective of the NHS in England and Wales. Results were expressed in terms of accrued costs and consequences, and one-way sensitivity analysis (OWSA) and scenario analysis was used to explore key model assumptions and inputs. **RESULTS:** COPAL® G+C was associated with a reduction in the probability of a patient suffering either a deep or superficial infection as well as a reduction in the probability of experiencing a revision procedure. Overall, cost savings of £1,047.73 per patient were achieved with the use of the dual-antibiotic cement. OWSA found results to be robust to changes in key model parameters; assumptions around probabilities of 30-day survival were a key model driver. Of explored scenarios, the greatest impact was observed with the removal of deep SSIs from the model, which reduced cost savings to £93.80 per patient. **CONCLUSIONS:** Use of dual antibiotic bone cement can lead to reductions in the rate of SSIs and requirements for revision surgery. In addition to a clinical benefit, this has the potential to generate meaningful cost savings for the NHS in England and Wales.

PMD61

THE ADDITION OF A NOVEL COLONOSCOPE DEVICE IMPROVES ADENOMA DETECTION IN A GERMAN SCREENING POPULATION WHICH MAY RESULT IN COST SAVINGS DUE TO FEWER CASES OF COLORECTAL CANCER

Conway P[1], Fischbach W[2], Carr PJ[1], Amlani BM[1], Johnson KI[3], Jones C[3], Kay M[3]
[1]*Norgine Ltd, Harefield, UK,* [2]*Klinikum Aschaffenburg, Aschaffenburg, Germany,* [3]*Double Helix Consulting, Macclesfield, UK*

OBJECTIVES: A number of studies have reported that up to 27% of adenomas are missed during screening colonoscopy for the prevention or detection of colorectal cancer (CRC). A suboptimal adenoma detection rate (ADR) is significantly associated with a higher incidence of CRC, with adenomas often being located at the proximal side of a mucosal fold. ENDOCUFF VISION™ is a novel device that sits firmly over the tip of the colonoscope, and which, by flattening mucosal folds, has been shown to significantly improve ADR. The benefit of using this device in reducing interval CRC has been investigated in a cost-consequence model with a 10 year time horizon. **METHODS:** The model compares the use of 2L polyethylene glycol + ascorbate components (2LPEG+ASC) as a bowel cleansing preparation, with or without use of this device. The additional cost of the device (set at €30) is modelled, together with the potential cost savings through improved ADR and CRC prevention. Model inputs include rates of successful bowel cleansing, number of completed colonoscopies, ADR, rates of surveillance colonoscopy, associated costs, and resource utilisation in a cohort of 10,000 patients who are eligible for screening in the German healthcare system. Model outputs include cases of CRC missed or prevented, cost of colonoscopy, and the per person costs. **RESULTS:** The model shows that the improved ADR through the use of this colonoscope device with 2LPEG+ASC, compared with 2LPEG+ASC alone, avoids progression to CRC in more individuals. Despite an increase in the overall cost due to repeat colonoscopies, the use of the device leads to an overall saving in CRC treatment costs of €5,137,894, resulting in a cost saving of €283 per person screened over 10 years. **CONCLUSIONS:** The use of ENDOCUFF VISION™ can improve ADR, which may reduce the development of CRC, avoid treatment costs, and reduce mortality.

PMD62

COST-EFFECTIVENESS ANALYSIS OF CONTINUOUS REMOTE MONITORING OF HEART FAILURE PATIENTS WITH CARDIAC ELECTRONIC IMPLANTABLE DEVICE

Malbaski N[1], Balazs T[2], Dozsa C[3], Zima E[4]
[1]*Med-Econ Ltd., Veroce, Hungary,* [2]*BIOTRONIK Hungary, Budapest, Hungary,* [3]*University of Miskolc, Miskolc, Hungary,* [4]*Semmelweis University, Budapest, Hungary*

OBJECTIVES: To conduct a cost-effectiveness analysis (CEA) of continuous remote monitoring (RM) of heart failure (HF) patients with cardiac electronic implantable device. **METHODS:** A cost-effectiveness analysis was conducted for a 10-year time horizon, from third-party–payer perspective only including the direct healthcare costs. A Markov model was adapted with four health states for two alternatives: (1) continuous RM with data transmission on a daily basis, (2) conventional, regular in-office follow-up (CFU). The costing estimates are based on Hungarian data. The effectiveness is measured as the number of life years saved. The input data of effectiveness are based on randomised clinical trials and data provision of the Hungarian National Health Insurance Fund Administration. **RESULTS:** As a result of CEA, 652 life years can be saved in a 10-year time horizon in a patient cohort (N=100). The ICER value is 1.78 million HUF (≈ 5,730 EUR) per life year saved. To our estimation 4,500-5,600 HF patients could be continuously remote monitored by the end of the 5th year with a gradual inclusion of patients. Taking into account the mortality of both arms, under 5 years, extra 520-650 lives (among the gradually involved 4,500-5,600 patients) can be saved with using RM compared to the CFU. Both to the deterministic and probabilistic sensitivity analysis the ICER calculated is relatively robust. **CONCLUSIONS:** The ICER calculated is lower than the threshold of cost-effectiveness set in Hungary. The number of lives can be potentially saved is favourable, especially by the HF patient population regarding its relatively low 5-year survival rate (below 50%). The Hungarian health policy should consider the inclusion of RM into the public reimbursement system and at the same time establishing a patient registry for the remotely monitored HF patients to evaluate the long term benefits of RM.

PMD63

COST-EFFECTIVENESS OF CAPNOGRAPHY MONITORING DURING GASTROINTESTINAL ENDOSCOPY TARGETING MODERATE SEDATION

Saunders R[1], Erslon MG[2], Vargo J[3]
[1]*Ossian Health Economics and Communications GmbH, Basel, Switzerland,* [2]*Medtronic, Boulder, CO, USA,* [3]*Cleveland Clinic, Cleveland, OH, USA*

OBJECTIVES: Capnography monitoring is recommended during moderate sedation, although its uptake has been restricted by concerns over excess costs and demonstration of safety benefit. This analysis investigates the cost-effectiveness of capnography for moderate sedation during gastrointestinal endoscopy. **METHODS:** Randomized clinical trial (RCT) and large-scale study data were used to build a model of moderate sedation for endoscopic procedures that compared outcomes using pulse oximetry alone with pulse oximetry plus capnography. Adverse events (AEs) considered included apnea, bradycardia, desaturation, and hypotension. Interventions to treat AEs were taken from guidelines with costs derived from the Premier database and literature review. Adverse outcomes included unplanned admission and mortality. Odds ratio for events with capnography were taken from RCTs and a meta-analysis, where available, data specific to moderate sedation were used. The model base case assumed no progression into deep sedation and patients with mean characteristics of age 55 years, body mass index 26 kg/m^2, and 45% male. Probabilistic sensitivity analyses were performed. **RESULTS:** In the base case, utilization of capnography reduced the proportion of patients experiencing ≥1 AE by 18.0% and resulted in 1 AE of any severity being avoided every 9 procedures. The mean number needed to treat (95% credible interval [CrI]) to avoid an apnea or severe desaturation AE was 27 (–109–409) and 17 (4–308), respectively. Due to the reduction in AEs, capnography resulted in a saving of $55 (95% CrI –96–247) per procedure at 1 year. The key cost driver was reduced use of airway interventions with capnography. Assuming that AEs did not incur costs; capnography increased the cost per procedure by $9, costing $83 per adverse event avoided. **CONCLUSIONS:** Capnography is likely to be cost-effective for monitoring moderate sedation even without considering progression to deep sedation. Estimates indicate that it may also be cost saving.

PMD64

COST-EFFECTIVENESS ANALYSIS OF CAPSULE ENDOSCOPY USING FOR DIAGNOSING SMALL BOWEL CROHN'S DISEASE

Dozsa C[1], Malbaski N[2], Borcsek B[2]
[1]*University of Miskolc, Miskolc, Hungary,* [2]*Med-Econ Ltd., Veroce, Hungary*

OBJECTIVES: To conduct a cost-effectiveness analysis (CEA) of capsule endoscopy (CE) used in the indication of diagnosing small bowel Crohn's disease (CD). **METHODS:** A cost-effectiveness analysis was conducted for a one-year time horizon, from third-party–payer perspective only including the direct healthcare costs, like outpatient care, inpatient care and pharmaceutical consumption. A decision tree structure was defined with two alternatives: (1) capsule endoscopy (with using patency capsule), (2) standard diagnostic package including Calprotectin test, ultrasound, colonoscopy with ileoscopy, CT enterography. The costs are expressed in monetary value, the effectiveness is measured as the number of patients with accurate and appropriate diagnosis (true negative and true positive). The sensitivity and specificity for diagnosing CD used as input data of model are based on a review of literature. The value of prevalence of CD and the costing estimates are based on Hungarian data. **RESULTS:** To the available sensitivity, specificity for diagnosing CD and the prevalence data, the diagnostic accuracy of CE and standard diagnostic package used in Hungary are the followings, respectively: true positive (0.7 vs. 0.532), true negative (0.273 vs. 0.2518), false negative (0 vs. 0.168), false positive (0.027 vs. 0.0482). 97 of 100 patients likely to be diagnosed accurately and appropriately using CE compared with 78 of 100 patients using standard diagnostic package. As a result of CEA, the ICER value is 703,500 HUF per accurately and appropriately diagnosed patient. **CONCLUSIONS:** The CE has been used for years in Hungary in given indications but not in diagnosing small bowel CD. The ICER calculated is lower than the threshold of cost-effectiveness set in Hungary. Taken into account the diagnostic yield and the advantages of CE, the result of CEA, extending the indications of CE for diagnosing small bowel CD should be considered by the Hungarian health policy.

PMD65

INCREASED COST-EFFECTIVENESS OF DIAGNOSTIC IMAGING IN PATIENTS WITH SUSPECTED CAD BY USING A NEW CLINICAL-BIOHUMORAL PREDICTIVE MODEL OF DISEASE

Lorenzoni V[1], Caselli C[2], Rovai D[2], Neglia D[2], Turchetti G[1]
[1]*Scuola Superiore Sant'Anna, Pisa, Italy,* [2]*National Research Council, Pisa, Italy*

OBJECTIVES: To evaluate the cost-effectiveness of an imaging diagnostic strategy for stable coronary artery disease (CAD) guided by a new model to estimate the pre-test likelihood of disease that integrates specific circulating biomarkers with common clinical variables using data collected through the EVINCI study. **METHODS:** In the clinical standard path (CSP) pre-test likelihood of disease was estimated by the Genders model (based on age, sex and symptoms) while the new clinical-biohumoral path (CBP) included the integration of previously selected bio-humoral predictors of CAD (HDL-cholesterol, aspartate-transaminase and C-reactive protein) to define the pre-test likelihood. In both paths, according to the 2013 ESC-Guidelines for management of stable CAD, the pre-test likelihood guided further examinations: no other test for low probability (<15%), non-invasive imaging in intermediate probability (15%-85%) and direct invasive coronary angiography (ICA) for high probability (>85%). Effectiveness was defined in terms of correct diagnosis at ICA. Costs of the diagnostic pathways were calculated per-patients considering reimbursement of non-invasive and invasive examinations as well as biomarkers assay in the CBP. All costs were expressed in Euro 2013. **RESULTS:** Considering 487 subjects enrolled in the EVINCI study because of suspected CAD and having a complete clinical, biohumoral and imaging profile, the CBP dominates the CSP being more effective and less costly. Specifically, CBP allowed for 90.6% (±29.3%) correct diagnoses with a mean cost of 352.9 Euros (±752.5), while CSP correctly diagnosed 88.9% (±29.3%) of cases at a mean cost of 615.6 Euros (±861.1). Results did not change when accounting for missed CAD diagnoses. **CONCLUSIONS:** The estimation of pre-test likelihood of CAD integrating circulating biomarkers and clinical variables allows for more accurate and more cost-effective diagnostic strategies, avoiding unnecessary diagnostic tests. The new predictive model is an effective gate-keeper to non-invasive and invasive imaging tests in patients with symptoms of stable CAD.

PMD66

ECONOMIC EVALUATION OF INDIVIDUALLY VS VIAL-PACKAGED STRIPS FOR GLUCOSE MONITORING

Martin Saborido C, Antón Rodriguez C
Universidad Francisco de Vitoria, Pozuelo de Alarcón, Spain